

The impact of internal debt on gross domestic product and taxes for a sample of Arab countries

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Abstract:

The research dealt with the relationship between tax revenues and internal debt, and then the relationship between internal debt and GDP for a sample of oil-exporting and importing Arab countries. Arab countries (Iraq, Saudi Arabia, Egypt, Jordan) recorded different levels of internal debt ratios, as well as different sources of public revenues, The oil-exporting countries (Iraq, Saudi Arabia) relied on oil revenues to a large extent and at high rates of public revenues, as each of them reached (87.3%, 58.2) respectively, and thus in the sustainability of the internal debt, the imported oils (Egypt, Jordan) are based on tax revenues and high percentages of public revenues, from Egypt and Jordan ratios (75.8%, 70.5%) respectively, While the oil exporting countries (Iraq, Saudi Arabia) recorded low ratios (7.5%, 25.6%), respectively, while regarding the percentage of internal debt to GDP reported in Egypt the lowest percentage among countries by (8%) while Jordan was the highest among States were (61%), Iraq and Saudi Arabia were estimated (32.3%, 19.1%), The oil exporting countries have resorted to improving tax revenues by imposing new taxes (Saudi Arabia) or increasing the tax rate (Iraq) after oil prices fall. The researcher recommended the need to improve the tax system for Iraq, in addition to directing oil surpluses to develop other sectors,

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such as the tourism sector, for example. Internal debt instruments also varied for Egypt compared to the rest of the sample countries. The researcher recommended the need to improve Iraq's tax system, in addition to directing oil surpluses to develop other sectors, such as the tourism sector, for example, which could lead to increasing the percentage of non-oil revenues' contribution to total public revenues, as well as raising the contribution of non-oil output to the gross domestic product.

Keywords: Internal Debt, Tax Revenue, GDP.

.Introduction

Most countries in the world suffer from the problem of public debt, as this variable can lead to negative effects on economic growth, especially if it reaches large proportions of gross domestic product. Most Arab countries resort to borrowing through short and long-term internal debt instruments such as transfers and bonds, in order to finance most of the deficit in the state's public budget, with our knowledge of the weak tax systems of those countries, especially the oil ones. Including those that are vulnerable to fluctuations in oil prices, which cause deficiencies in public revenues, and thus the public .budget deficit

The continuation of the internal debt process is limited by restrictions that cannot continue to be accumulated, as some Arab countries depend on the sustainability of the internal debt either on their oil revenues (oil-exporting countries) or through tax revenues (oil-importing countries)), and the Maastricht Treaty (of the European Union) determined The volume of the accepted public debt is within the limits of (60%) of the GDP, but the majority of countries exceed this percentage, as the countries (Greece, Italy, Portugal, Spain, France, Belgium, Cyprus, Austria, Hungary, Slovenia, Finland, Croatia, Germany) exceeded the percentage of (60%), as the percentage was for Greece (178.2%), Italy (147.3%), Portugal (120.1%), Spain (115.6%), France (113.4), Belgium (106.3%), in addition to The European Union countries, in total, exceeded this percentage, at the end of the third quarter of 2022 Part of this debt can be directed to the investment side, which means that

the internal debt can be sustainable. During the research, the researcher will explain the impact of internal debt on future tax revenues on the one hand, and the impact of GDP on internal debt on the other hand, as the vast majority of studies show the second direction of this relationship, which is the impact of internal debt on GDP

Research problem:

Most Arab countries (exporting and importing oil) suffer from a deficit in their public budgets, which requires financing it to fill or reduce the size of the budget deficit by enhancing future tax revenues or internal debt, and continuing the debt process is not possible unless it is sustainable

Research importance:

The importance of the internal debt variable comes from the importance of studying it and the factors that restrict it and are affected by it, as Arab governments face a deficit in their public budgets, which requires financing against the fluctuation of these factors (oil and tax revenues). Therefore, these two variables must be studied as well, as the increase in debt is linked to its ratio to the gross domestic product. Total, which requires continued monitoring of this percentage

Research aims:

The research aims to:

1. Explaining the relationship of internal debt to tax revenues and gross domestic product.
2. Explaining the importance of oil and tax revenues in reducing the deficit and/or financing internal debt.

Research hypothesis:

1. The researcher hypothesizes the following hypotheses:
2. There is a positive relationship between tax revenues and the internal debt of Arab countries.
3. There is an inverse relationship between internal debt and the gross domestic product of Arab countries.

Theoretical

Literature and studies deal a lot with the relationship between public debt, gross domestic product, and taxes, but most of them do not focus on internal debt, on the one hand, and the direction of the relationship between variables, on the other hand.

It was reported in the study of (Yamin et al 2023) titled "The Influence Of Public Debt On Economic Growth: A Review Of Literature". They found the negative impact of public debt on the growth of economic growth.

As for (Checherita and Rother 2010), they stated in their paper entitled "The impact of high and growing government debt on economic growth an empirical investigation for the euro area" that the negative impact of the debt-to-GDP ratio when it reaches 70% to 80%. The channels through which government debt affects the rate of economic growth are: private saving, public investment, total factor productivity, and long-term sovereign nominal and real interest rates.

Internal Debt

The internal debt plays an important role in supplying the public budget with the necessary revenues to finance the deficit resulting from the inability of revenues to cover expenditures, and the internal debt can push countries to pressure on other revenues in the future, and taxes are one of these revenues, and the internal debt can also decrease with an increase in GDP in particular For oil-producing countries whose oil revenues constitute the largest proportion of their revenues, and thus the possibility of sustaining the internal debt through this revenue

internal debt represents the public debt owed to citizens, companies and institutions within the same country (resident units) that issued the debt Taxes

The term taxation in the OECD classification is limited to compulsory payments to public government and gratuitous, meaning "gratuitous" taxation, that is, the benefits provided by the government to taxpayers that are out of proportion to their payments

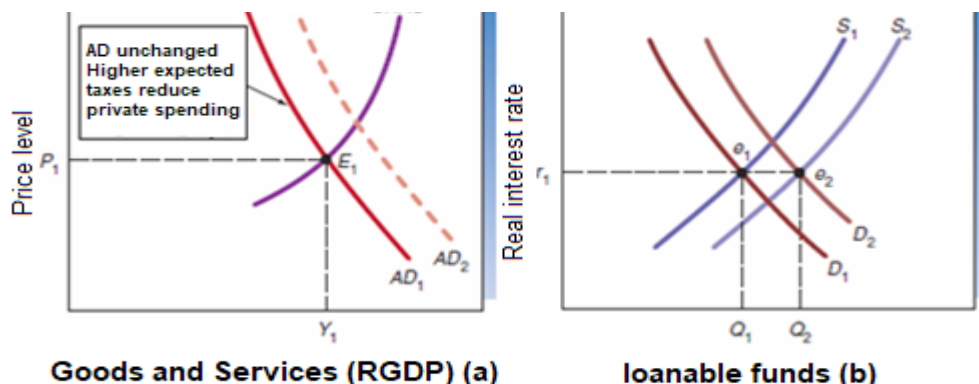
There are several very common types of taxes: Income tax, Payroll tax, Corporate tax, Sales tax, Property tax, Tariff, Estate tax

Gross Domestic Product

Gross Domestic Product (GDP) measures the monetary value of final goods and services - that is, those purchased by the end user - produced in a country in a certain period of time (quarterly or annually), as all output produced is counted within the borders of the country, and GDP consists of goods and services Produced for sale on the market and also includes some non-market production such as defense or education services provided by the government (www.imf.org).

The impact left by the national debt (public debt) on future generations has remained a point of contention for several decades. Opponents of debt financing start from the issue of mortgaging the future of future generations, meaning that debt financing allows us to consume today and then send the bill to future generations. As for the aspect related to the redistribution of the burden between generations, it is a justification for the so-called golden rule of public finance, and according to that rule: when managing the public deficit, governments should finance public investments that generate long-term benefits to make future generations contribute to financing, and since future generations will benefit from Today's investments, their contribution to financing is justified, otherwise the current generation will bear all the costs but will only benefit to a certain degree which is considered unfair. borrowing implies higher taxes in the future, and this can limit the expansionary effect of increased government spending. If households and firms take into account higher future taxes, they tend to save more today so they can pay those taxes in the future. If individuals do not expect future taxes to rise, then aggregate demand will rise. when households However, demand remains unchanged at AD^1 . rise to AD^2 anticipate future tax increases (part a). Meanwhile, additional saving to meet and allows higher future taxes will increase the supply of loanable funds to S^2 the government to borrow money to finance its deficit without raising the real interest rate (Part b). In this model, fiscal policy does not exert any influence, with

real interest rates, real GDP, and the level of employment remaining unchanged .(١) and this can be illustrated by **Figure** ,



Source: Gwartney, James, et al (2008) *Macroeconomics: Private and Public* 13th edition. 261.

2. Analysis of the development of internal debt and its effects

The Arab countries, including the oil ones, are witnessing a rise in internal debt and its ratio to the GDP, which may affect other economic variables, which necessitates that these countries find appropriate solutions that limit the internal debt. The solutions differ according to the nature of the economy

Table (1) shows the decrease in the **internal debt of Iraq** during the years (2005-2008) as a result of the rise in oil prices and the payment of debts owed while it increased in 2009 and 2010 as a result ,%by the Ministry of Finance of the effects of the global financial crisis, and the volume of internal debt decreased during (2011-2013) After the recovery of oil prices with the continued payment of the Ministry of Finance's debt, and after Iraq entered the double crisis represented by the drop in oil prices and the increase in military spending to fight ISIS, the internal debt increased at the beginning of the crisis from 2014 until achieving victory over ISIS in 2017 and the recovery of oil prices in 2018 and 2019. However, this debt increased in 2020 by (67.6%) as a result of the second double crisis represented by the sharp drop in oil

prices and the Corona pandemic, followed by an increase by (8.8%) in 2021, as a result of an increase in a number of components of the internal debt due to the increase in the financial obligations of the state following the two crises .⁰¹of low oil prices And the Corona pandemic

As for the **internal debt of Saudi Arabia**, it decreased during the period (2005-2014), when the amount repaid was greater than the borrower, and the size of the debt decreased significantly during the years (2012, 2013, 2014) because the amount borrowed was zero, while this debt increased. During the period (2015-2021), where the internal debt growth rate increased in 2015 by (221.4%), which is the highest during the research period, due to the actual deficit in the public budget amounting to (388,599) million riyals resulting from the sharp decline in international oil prices. (2015-2021) an actual deficit, and the internal debt reached its lowest volume in 2014 with a value of (44,260) million riyals, and the internal debt increased by (11.2%) in 2021, reaching its highest volume with a value of (558,700) million riyals, due to the budget deficit The actual amount of (-73.447) million riyals, in addition to non-payment in 2015 and a decrease in the payment rate in 2018 and 2019 compared to 2017. Saudi Arabia has approved the public budget for the year 2022 with the expectation that there will be no deficit for the first time since 2014.

Egypt's internal debt data showed positive growth rates during the research period, as the lowest level of internal debt volume was recorded in June 2005 at a value of (504,681) million pounds, compared to its highest volume in June 2020 at a value of (4,742,107) million pounds. In the same direction, the data showed an increase in rates of debt. The budget deficit during the research period reached the lowest deficit in the fiscal year (2004-2005) with a value of (50,747) million pounds, while the largest deficit in the fiscal year (2019-2020) amounted to a value of (-459,294)¹¹ million pounds, and despite this deficit, the Its ratio to the GDP has decreased, as shown in **Table (1)**.

Jordan's internal debt witnessed an increase over the duration of the research, and this is due to the increase in the public budget deficit, while the year 2017 witnessed a decrease in the annual growth rate of the internal debt

by (-2.5%), due to the decrease in the public budget deficit (after grants) ²¹by (14.9%) And (before grants) by (15.1%)³¹, and since the volume of debt amortization is less than the debt, the volume of internal debt has increased for the year 2021 by (7%), which is attributed to the budget deficit amounting to (1,730.6-) million dinars.

Table (1):
Internal debt (selected Arab countries)
• million monetary units

Year	Iraq	Saudi Arabia	Egypt	Jordan
2005	6,593,960	459,647	504,681	2,467
2006	5,645,390	364,622	587,405	2,961
2007	5,193,705	266,762	630,966	3,695
2008	4,455,569	235,034	658,307	5,754
2009	8,434,049	225,108	755,297	7,086
2010	9,180,806	166,999	888,715	7,980
2011	7,446,859	135,499	1,044,898	9,996
2012	6,547,519	83,848	1,238,137	12,678
2013	4,255,549	60,118	1,527,378	13,440
2014	9,520,019	44,260	1,816,582	14,621
2015	32,142,805	142,260	2,116,345	15,487
2016	47,362,251	213,455	2,620,662	15,794
2017	47,678,796	259,502	3,160,864	15,402
2018	41,822,918	304,980	3,696,401	16,221
2019	38,331,548	372,764	4,282,112	17,738
2020	64,246,559	502,656	4,742,107	18,934
2021	69,912,394	558,747		20,260

Iraqi internal debt: Central Bank of Iraq, statistical website: www.cbiraq.org

- Saudi internal debt: Central Bank of Saudi Arabia, economic reports and statistics, statistics, annual statistics: www.sama.gov.sa
- Saudi internal debt 2021: Ministry of Finance, National Center for Debt Management, reports and statistics: www.ndmc.sa
- Egyptian internal debt: The Central Bank of Egypt, annual report

(various years), published on the website: www.cbe.org.eg

- Jordanian internal debt: Central Bank of Jordan, statistical database: www.statisticaldb.cbj.gov.jo
- Egyptian internal debt balances were at the end of June of each year.

2.1 The relationship of internal debt and the volume of tax revenues

Taxes constitute an important part of the total public revenues of the state, and therefore they are ,(%٧٠) to the extent that they reach rates that exceed a sovereign tool that can be used to finance the public budget as well as to address the problems of the economic cycle. An increase in internal debt can lead to pressure towards increasing taxes (to a certain extent), on the other hand, increasing taxes leads to mitigating the public budget deficit and thus the possibility of servicing the internal debt, and increasing taxes at a certain limit can negatively affect the growth of GDP due to the impact on the producer and / or consumer (increased burden), and it can An analysis of the :impact of this relationship on the selected Arab countries, as follows

2.1.1 Internal debt and volume of tax revenues (Iraq)

It is clear from Table (2) that tax revenues tended to increase with the increase in internal debt, as the degree of correlation reached (0.79), and the response of tax revenues to the volume of debt ranged between low elasticity and high elasticity (inverse and positive). Oil revenues and thus the decrease in the volume of internal debt, while the highest degree of elasticity reached (94.39) in 2017 as a result of tax growth at a rate greater than the growth of internal debt, as tax revenues grew as a result of the restriction of a tax (20%) on mobile phone recharge cards and Internet networks in the 2017 budget according to Article (23) First, which states: “Continuing to impose a tax on mobile phone and Internet recharge cards at a rate of (20%) (twenty percent) of the value of the card, and it shall be credited as revenue to the public treasury.” The tax rate was also raised from (10%) to (12%) on the annual returns

.of real estate properties¹⁴

The ratio of tax revenues to total revenues ranged between (1.2% - 8.1%), as it reached the highest rate in 2017 (during the double crisis), then it decreased again during the next two years, but it returned and recorded an increase of (7.5%) in 2020, The level of internal debt also reached the highest growth rate of (237.6%) in 2015 as a result of the previously mentioned double crisis, while tax revenues recorded the highest growth rate amounting to (238.3%) in 2009, and the compound growth of internal debt and tax revenues reached (16.4%, 16.2%), respectively. The Iraqi government has canceled the sales tax imposed on mobile phone and Internet recharge cards, amounting to (20%), as of December 1, 2022, which was previously approved in the 2015 .Budget Law, after the double crisis that the country went through

It can be concluded from the foregoing that tax revenues in Iraq did not constitute a great importance in relation to public revenues, due to the weakness of the tax system used in Iraq, which did not make it a tool to cover the deficit in the public budget, which explains the impact of the Iraqi economy on sharp fluctuations in oil prices (positively and negatively).) as a result of the heavy reliance on oil revenues relative to public revenues on the one hand, and the decision to impose and cancel the tax was linked to the realization of .the deficit or surplus on the other hand

Table (2):
The effect of internal debt on the volume of tax revenues
(Iraq)

(million dinars, %)

Year	Internal debt	Tax revenue	Annual growth of internal debt	Annual growth of tax revenue	Ratio of tax revenue to total revenue	Elasticity of tax revenue of internal debt
2005	6,593,960	495,282	-	-	1.2	-
2006	5,645,390	593,887	-14.4	19.9	1.2	-1.38
2007	5,193,705	1,397,991	-8.0	135.4	2.6	-16.92
2008	4,455,569	985,837	-14.2	-29.5	1.2	2.07
2009	8,434,049	3,334,809	89.3	238.3	6.0	2.67
2010	9,180,806	1,532,438	8.9	-54.0	2.2	-6.10
2011	7,446,859	1,783,593	-18.9	16.4	1.8	-0.87
2012	6,547,519	2,633,357	-12.1	47.6	2.2	-3.95
2013	4,255,549	2,876,856	-35.0	9.2	2.5	-0.26
2014	9,520,019	1,885,127	123.7	-34.5	1.8	-0.28
2015	32,142,805	2,015,010	237.6	6.9	3.0	0.03
2016	47,362,251	3,861,896	47.3	91.7	7.1	1.94
2017	47,678,796	6,298,272	0.7	63.1	8.1	94.39
2018	41,822,918	5,686,211	-12.3	-9.7	5.3	0.79
2019	38,331,548	4,014,531	-8.3	-29.4	3.7	3.52
2020	64,246,559	4,718,189	67.6	17.5	7.5	0.26
2021	69,912,394	4,536,242	8.8	-3.9	4.2	-0.44
compound growth	15.9%	14.8%				
CORREL	0.79					

Internal debt, tax revenues: Central Bank of Iraq, statistical website: www.cbiraq -

2.1.2 Internal debt and the volume of tax revenues (Saudi Arabia)

the decrease in the volume of internal debt against (✓) It is noted from Table the increase in the volume of tax revenues during the period (2010-2014) and with weak elasticity (the response of tax revenues to changes in the internal debt). This explains the reliance on other revenues (oil revenues) to sustain the internal debt, as the same period witnessed a decrease in the proportion of tax revenues to total public revenues, as the ratio ranged from (0.1% -7.6%). In contrast, tax revenues increased with the increase in internal debt during the period (2015-2018) and with a positive (response) elasticity that ranged between (0.004-11.48). In contrast to the increase in the proportion of tax revenues to total public revenues, as the ratio ranged from (12.6% - 29.1%), and tax revenues increased in 2018 by (201.2%) over the previous year, after the introduction of value-added tax (VAT) on goods and services subject to to be applied on ,⁵¹(it at a rate (5%), and this percentage was raised to (15% ,⁷¹and its impact has not yet appeared during the research period ,⁶¹1.7.2020 and the compound annual growth of internal debt and tax revenues reached .((9.3%, 17.9%) respectively, with a correlation of (0.76

It is clear from the foregoing that Saudi Arabia sustained the internal debt through oil revenues during the period (2010-2014). The contribution of tax revenues to public revenues has led to the impossibility of continuing the internal debt process, which reached its highest level in 2021 with a value of .(558,747) million riyals

Table (3):

**The effect of internal debt on the volume of tax revenues
(Saudi)**

(Million Riyals)

Year	Internal debt	Tax revenue	Annual growth of internal debt	Annual growth of tax revenue	Ratio of tax revenue to total revenue	Elasticity of tax revenue of internal debt
2005	459,647	-	-	-	-	-
2006	364,622	-	-20.7	-	-	-
2007	266,762	-	-26.8	-	-	-
2008	235,034	-	-11.9	-	-	-
2009	225,108	-	-4.2	-	-	-
2010	166,999	50,106.00	-25.8	-	6.8	-
2011	135,499	58,699.00	-18.9	17.1	5.3	-0.91
2012	83,848	70,058.00	-38.1	19.4	5.6	-0.51
2013	60,118	76,548.00	-28.3	9.3	6.6	-0.33
2014	44,260	78,605.00	-26.4	2.7	7.6	-0.10
2015	142,260	81,810.00	221.4	4.1	13.4	0.02
2016	213,455	81,987.00	50.0	0.2	15.8	0.004
2017	259,502	87,403.17	21.6	6.6	12.6	0.31
2018	304,980	263,261.00	17.5	201.2	29.1	11.48
2019	372,764	220,053.35	22.2	-16.4	23.7	-0.74
2020	502,656	200,000.00	34.8	-9.1	25.6	-
2021	558,747	295,000.00 ..	11.2	47.5	23.3	
Compound growth	10.6	15.9				
CORREL	0.85					

Internal debt: Central Bank of Saudi Arabia, economic reports and statistics, statistics, annual statistics: www.sama.gov.sa

Tax revenues: World Bank.

Compound annual growth of internal debt and tax revenues during the period 2010-2021

2.1.3 Internal debt and volume of tax revenues (Egypt)

Table (4) shows that tax revenues constituted a large percentage of public

revenues, as it reached its highest percentage in the fiscal year (2018-2019) at (78.2%), due to the increase in tax revenues by about (108) billion pounds, ^ which It is the result of the following

.Increased tax revenues on income and capital gains

.Increased property tax revenue

.(Increasing the proceeds of taxes on international trade (customs

While the fiscal year (2013-2014) recorded its lowest percentage, it was (57%). The increase in the volume of tax revenues is over the period ^ attributed to the increase in the budget deficit of research, which is reflected in the volume of internal debt (public expenditures) that requires financing through taxes (public revenues), and this is noted through the high degree of correlation amounting to (0.92) enhanced by the degrees of elasticity of tax revenues for positive changes in internal debt (Low elasticity) during most fiscal years, while the highest degree of elasticity (3.67) was recorded in the fiscal year (2017/2018), as The compound annual growth rate of internal debt and tax revenues amounted to (14% and 18%), respectively.

Table (4)

(The effect of internal debt on the volume of tax revenues (Egypt :

(% ,Million Pounds)

Fiscal year	Internal debt	Tax revenue	Public revenue	Public budget	Ratio of tax revenue to total revenue	Elasticity of tax revenue of internal debt
2004-2005	71,105	75,759	110,864	-50,747	68.3	-
2005-2006	54,381	97,779	151,266	-56,545	64.6	-0.73
2006-2007	33,283	114,326	180,215	-41,814	63.4	-0.23
2007-2008	*527	137,195	221,404	-60,886	62.0	0.003
2008-2009	83,627	163,222	282,505	-68,995	57.8	0.16
2009-2010	101,492	170,494	268,114	-97,873	63.6	0.24
2010-2011	144,295	192,072	265,286	-136,580	72.4	0.38
2011-2012	182,411	207,410	303,622	-167,370	68.3	0.35
2012-2013	270,624	251,118	350,322	-237,866	71.7	0.53
2013-2014	277,319	260,289	456,788	-244,726	57.0	1.46
2014-2015	327,728	305,957	465,241	-268,109	65.8	0.97
2015-2016	**	352,315	491,488	-326,356	71.7	-
2016-2017	398,784	462,007	659,184	-372,757	70.1	-
2017-2018	429,784	628,083	805,741	-423,391	78.0	3.67
2018-2019	467,949	736,121	941,910	-427,960	78.2	1.80
2019-2020	447,373	739,633	975,430	-459,294	75.8	-0.10
compound growth	14%	18%				
CORREL	0.92					

Central Bank of Egypt, annual report (different years), published on the website: www.cbe.org.eg

- The fiscal year (2015-2016) was excluded from the analysis.

- * Bank financing amounted to (-3,187), resulting from negative central bank financing, amounting to (-33,394).

- ** Detailed data is not available.

2.1.4 Internal Debt and Volume of Tax Revenue (Jordan)

Table (٩) shows that the increase in internal debt led to an increase in tax revenues, as the annual growth of tax revenues recorded positive rates during the research period, while tax revenues grew in 2017 despite the decrease in the volume of internal debt for the same year, Where tax revenues recorded the second lowest growth rate, at a rate of (2.1%), and the correlation between internal debt and tax revenues came with a high degree of (0.98), As for the elasticity of tax revenues to changes in internal debt, it was positive and to inelastic degrees for most years, meaning that there was a weakness in the response.

As for the changes in the elasticity of the tax revenues of the internal debt, they ranged between high elasticity during the years (2006, 2013, 2014, 2016, and 2021) with degrees (1.04, 1.49, 1.20, 1.94, 1.92) respectively, and between low elasticity for the rest of the years except for 2017 was low elasticity and a negative sign, due to the decrease in the volume of internal debt resulting from the increase in public revenues (domestic revenues and external grants) from their previous level in 2016 by (5%) and resulting from the increase in It is noteworthy that tax revenues constitute a ⁰²(non-tax revenues by (19.9% ¹²(percentage high of total public revenues, as this percentage reached (76.8% in 2021, and the compound annual growth of internal debt and tax revenues .reached (14.1%, 7.5%), respectively

It is clear from the foregoing that the increase in the volume of internal debt led to an increase in future tax revenues, but these taxes are limited to a tax base, and therefore it is not possible to continue the internal debt process and then continue to impose more taxes, which is revealed by the degree of responsiveness (elasticity) of low taxes to changes in the size of the internal debt and the slope of the internal debt.

Table (5):

**(Effect of internal debt on the volume of tax revenues (Jordan
(Million Dinars, %))**

Year	Internal debt	Tax revenue	Annual growth of internal debt	Annual growth of tax revenue	Ratio of tax revenue to public revenue	Tax revenue elasticity of internal debt
2005	2,467	1,765.8	-	-	57.7	-
2006	2,961	2,133.5	20.0	20.8	61.5	1.04
2007	3,695	2,472.1	24.8	15.9	62.2	0.64
2008	5,754	2,758.1	55.7	11.6	54.1	0.21
2009	7,086	2,879.9	23.1	4.4	63.7	0.19
2010	7,980	2,986.0	12.6	3.7	64.0	0.29
2011	9,996	3,062.2	25.3	2.6	56.6	0.10
2012	12,678	3,351.4	26.8	9.4	66.3	0.35
2013	13,440	3,652.5	6.0	9.0	63.4	1.49
2014	14,621	4,037.1	8.8	10.5	55.5	1.20
2015	15,487	4097.1	5.9	1.5	60.3	0.25
2016	15,794	4,254.3	2.0	3.8	60.2	1.94
2017	15,402	4,343.5	-2.5	2.1	58.5	-0.84
2018	16,221	4,535.6	5.3	4.4	57.9	0.83
2019	17,738	4,680.8	9.4	3.2	60.4	0.34
2020	18,934	4,958.6	6.7	5.9	70.5	0.88
2021	20,260	5,626.9	7.0	13.5	76.8	1.92
compound growth	14.1% 7.5%					
CORREL	0.98					

Central Bank of Jordan, Annual Reports 2008-2021, Research Department.

2.2 Relationship between internal debt and economic growth

An increase in internal debt can lead to an increase in the GDP, if this debt is employed towards investment. If the ratio of internal debt to GDP

increases, this can be explained by the growth of internal debt at a rate greater than the growth of GDP (a decline in the sustainability of internal debt). In other words, the internal debt is not used for the benefit of economic growth, and an increase in the GDP of the oil-producing countries in particular can lead to a reduction in the volume of the internal debt. This will be identified by analyzing the relationship between the internal debt and the economic :growth of these countries, as follows

2.2.1 Iraq

Table (6) shows that the internal debt-to-GDP ratio reached the highest rate in 2020, reaching (32.3%), which is the same year that witnessed a growth in internal debt by (67.6%) as a result of the sharp drop in oil prices and negative growth in GDP the total, at a rate of (-28.5%) as a result of the Corona pandemic, and the years (2015, 2016, and 2017) witnessed high ratios of internal debt to GDP, amounting to (16.5%, 24.1%, and 21.5%), respectively, resulting from an increase in the volume of internal debt at rates It is high as a result of the double crisis, while it reached the lowest rate (1.6%) as a result of the decrease in the volume of internal debt by (-35%), which is the largest percentage of decrease, against the growth of the GDP by (7.6%) in 2013.

It is also noted that the internal debt and the GDP proceed inversely, meaning that the increase in the GDP (oil production represents the largest proportion of it) led to a decrease in the internal debt during the research years except for the years (2010, 2016, 2017), as in **Figure (2)**, The correlation score was weak (0.47)²².

When tracking the series of internal debt of Iraq (especially during crises), we find that it is linked to the decline in oil revenues, which results in a deficit in current spending, and therefore this debt is directed towards financing this part of the spending, which means weak possibility of financing the investment part of it, and then the growth of GDP.

Table (6)

(Relationship of internal debt and economic growth (Iraq :

(% ,Million dinars)

Year	Internal debt	GDP (current prices)	Annual growth of internal debt	Annual growth of GDP	Internal debt to GDP
2005	6,593,960	73,533,598.6	-	-	9.0
2006	5,645,390	95,587,954.8	-14.4	30.0	5.9
2007	5,193,705	111,455,813.4	-8.0	16.6	4.7
2008	4,455,569	157,026,061.6	-14.2	40.9	2.8
2009	8,434,049	130,643,200.4	89.3	-16.8	6.5
2010	9,180,806	162,064,565.5	8.9	24.1	5.7
2011	7,446,859	217,327,107.4	-18.9	34.1	3.4
2012	6,547,519	254,225,490.7	-12.1	17.0	2.6
2013	4,255,549	273,587,529.2	-35.0	7.6	1.6
2014	9,520,019	266,332,655.1	123.7	-2.7	3.6
2015	32,142,805	194,680,971.8	237.6	-26.9	16.5
2016	47,362,251	196,924,141.7	47.3	1.2	24.1
2017	47,678,796	221,665,709.5	0.7	12.6	21.5
2018	41,822,918	268,918,874.0	-12.3	21.3	15.6
2019	38,331,548	277,884,869.4	-8.3	3.3	13.8
2020	64,246,559	198,774,325.4	67.6	-28.5	32.3
2021	69,912,394	301,439,533.90	8.8	51.6	23.2
CORREL	0.47				

Internal debt, gross domestic product: Central Bank of Iraq: the statistical website www.cbiraq.org

2.2.2 Saudi Arabia

that the internal debt-to-GDP ratio started high in (٧) It is noted from **Table 2005** at a rate of (37.3%), and this ratio continued to decrease until it reached its lowest ratio in 2014 (1.6%). This is due to the rise in oil prices (the increase in public revenues). This gives the possibility of paying the internal debt installments, which started high in 2005 with a value of (459,647) million riyals until the year 2014 reached its lowest value (44,260) million riyals, then the aforementioned percentage rose again until it reached the highest rate in 2020 (19.1%)) At a time when the internal debt reached its highest value in 2021 (558,747) million riyals after oil revenues decreased as a result of the drop in oil prices, it is also noted that the internal debt growth rates were greater than the GDP growth rates during the research years except for the years (2008, .(2009, 2011, 2021

The degree of correlation between the two variables was (-0.11), which explains the dependence of the Saudi economy on oil revenues, which is supportive of servicing the internal debt in the event of an increase in oil revenues (gross domestic product), which leads to a decrease in the volume of .internal debt

Table (7)
Relationship of internal debt and economic growth (Saudi :
(Arabia

(Million Riyals, %)

Year	Internal debt	GDP (current prices)	Annual growth of internal debt	Annual growth of GDP	Internal debt to GDP
2005	459,647	1,230,771	-	-	37.3
2006	364,622	1,411,491	-20.7	14.7	25.8
2007	266,762	1,558,827	-26.8	10.4	17.1
2008	235,034	1,949,238	-11.9	25.0	12.1
2009	225,108	1,609,117	-4.2	-17.4	14.0
2010	166,999	1,980,777	-25.8	23.1	8.4
2011	135,499	2,517,146	-18.9	27.1	5.4
2012	83,848	2,759,906	-38.1	9.6	3.0
2013	60,118	2,799,927	-28.3	1.5	2.1
2014	44,260	2,836,314	-26.4	1.3	1.6
2015	142,260	2,453,512	221.4	-13.5	5.8
2016	213,455	2,418,508	50.0	-1.4	8.8
2017	259,502	2,582,198	21.6	6.8	10.0
2018	304,980	3,062,170	17.5	14.2	10.3
2019	372,764	3,013,561	22.2	0.8	12.5
2020	502,656	2,637,629	34.8	-11.7	19.1
2021	558,747	3,125,780	11.2	19.1	17.9
CORREL	-0.11				

internal debt, GDP at current prices: Central Bank of Saudi Arabia,
economic reports and statistics, statistics, Central Bank of Saudi Arabia
platform for open data: www.sama.gov.sa

Through the foregoing, it is noted that the relationship between the internal debt and the GDP of Iraq and Saudi Arabia is very close, as oil output greatly affects the relationship between the two variables. As the increase in the growth of the gross domestic product (oil output) led to a decrease in the volume of the internal debt and then the sustainability of the internal debt through the ratio of the internal debt to the GDP, which is noticeable through .(figures (2) and (3

2.2.3 Egypt

It is clear from **Table (8)** that the internal debt continues to grow despite the increase in the GDP, as the degree of correlation between them reached (0.94), as the internal debt continued to increase as a result of the Public budget deficit, and that the tax revenues, despite their increase as a result of the increase in the GDP, It was unable to reduce the percentage of the annual Public budget deficit, as the percentage of tax revenues reached (75.8%) of public revenues in the fiscal year (2019/2020), and the ratio of internal debt to gross domestic product reached (8%) for the same fiscal year, due to a decrease in The size of the internal debt increased by (-4.4%) and the growth of the gross .(domestic product by (8%

From the above, it is noted that Egypt relied on non-oil revenues (tax revenues) to sustain internal debt by increasing growth in the gross domestic :product and then increasing tax revenues, and **Figure (6a)** shows this

Table (8):
The relationship of internal debt and economic growth
Egypt

(Million Pounds, %)

Fiscal year	Internal debt	GDP	Annual growth of internal debt	Annual growth of GDP	Internal debt to GDP
2005/2004	71,105	506,511	–		14.0
2006/2005	54,381	581,144.1	–23.5	14.7	9.4
2007/2006	33,283	710,386.6	–38.8	22.2	4.7
2008/2007	* 527	855,301.8	–98.4	20.4	0.1
2009/2008	83,627	994,055.1	15768.5	16.2	8.4
2010/2009	101,492	1,150,589.6	21.4	15.7	8.8
2011/2010	144,295	1,309,905.7	42.2	13.8	11.0
2012/2011	182,411	1,713,146.1	26.4	30.8	10.6
2013/2012	270,624	1,924,807.9	48.4	12.4	14.1
2014/2013	277,319	2,205,594.1	2.5	14.6	12.6
2015/2014	327,728	2,473,099.9	18.2	12.1	13.3
2016/2015	**	2,674,409.6	–	8.1	–
2017/2016	398,784	3,417,149.2	–	27.8	11.7
2018/2017	429,784	4,334,900.3	7.8	26.9	9.9
2019/2018	467,949	5,170,107.1	8.9	19.3	9.1
2020/2019	447,373	5,581,996.6	–4.4	8.0	8.0
CORREL	0.94				

Internal debt: Central Bank of Egypt, annual report (different years)

published on

the website: www.cbe.org.eg

Gross Domestic Product: Egyptian Ministry of Planning and Economic Development, database website.

The fiscal year (2015-2016) was excluded from the analysis because it was not available from the source.

* Bank financing amounted to (3,187-) million pounds, resulting from the negative financing of the Central Bank, amounting to (33,394-) million pounds.

** Detailed data is not available.

4.2.2 Jordan

Table (٩) shows that the relationship of internal debt with GDP witnessed a trend parallel to each other. Despite the increase in GDP growth during the research period, this did not limit the growth of internal debt (as in oil Iraq and Saudi Arabia). The ratio of internal debt to GDP continued to rise until it reached the highest rate (63.1%) in 2021 as a result of the internal debt reaching its highest level, amounting to (32,122.7) million dinars, resulting from the continued public budget deficit during the research period, which is the same year in which the issuance volume exceeded Internal debt instruments for the volume of amortizations. This increase is due to the government's tendency to borrow with local bonds to cover the budget deficit and the deficit of the Water Authority, in addition to repaying the loans and bonds owed by the Water Authority for the year 2020³². Also, the continuous increase in the ratio of internal debt to GDP means that the percentage of increase in internal debt Greater than the rate of increase in GDP, in other words, the increase in internal debt did not lead to an increase in GDP.

Table (9):
The relationship of internal debt and economic growth
(Jordan)

(Million Dinars, %)

Years	Internal debt	GDP	Annual growth of internal debt	Annual growth of GDP	Internal debt to GDP
2005	2,467	8,925.4	-	-	27.6
2006	2,961	11,092.6	20.0	24.3	26.7
2007	3,695	12,131.4	24.8	9.4	30.5
2008	5,754	16,080.2	55.7	32.6	35.8
2009	7,086	17,421.9	23.1	8.3	40.7
2010	7,980	19,265.0	12.6	10.6	41.4
2011	9,996	20,962.1	25.3	8.8	47.7
2012	12,678	22,460.6	26.8	7.1	56.4
2013	13,440	24,462.7	6.0	8.9	54.9
2014	14,621	26,161.9	8.8	6.9	55.9
2015	15,487	27,396.8	5.9	4.7	56.5
2016	15,794	28,323.7	2.0	3.4	55.8
2017	15,402	29,400.4	-2.5	3.8	52.4
2018	16,221	30,481.8	5.3	3.7	53.2
2019	17,738	31,597.1	9.4	3.7	56.1
2020	18,934	31,025.3	6.7	-1.8	61.0
2021	20,260 32,122.7		7.0	3.5	63.1
CORREL	0.99				

Internal Debt, Gross Domestic Product: Central Bank of Jordan, Annual Reports -
2008-2020

. Research Department -

Comparison of results between selected Arab countries

After analyzing the relationship between the internal debt, tax revenues, and the GDP of the selected countries, we turn to explaining the differences between these countries in terms of the percentages that were mentioned during the research and the nature of the relationship between the variables .included in the research, in addition to the tools used in the internal debt

Figure (8) shows that the ratio of tax revenues to public revenues of the oil-exporting countries (Iraq, Saudi Arabia) was lower than that of the oil-importing countries (Egypt, Jordan), as Egypt appears the highest among the four countries with a rate of (75.8%), while Iraq comes in last In order, by (4.2%), as for the ratio of internal debt to GDP, Egypt came with the lowest ratio among countries, at (8%), as it is not negatively affected by the drop in oil prices, which leads to a large budget deficit, and it is the highest among these countries based on tax revenues. While Jordan was the highest among .countries with a rate of (63.1%) due to the continuous public budget deficit

.Data for Egypt was in the fiscal year 2019/2020

As for the internal debt structure of the selected countries, it differs from one country to another, as the Iraqi internal debt structure consists of remittances, bonds, and public institution loans, in addition to an old debt owed by the Ministry of Finance. Treasury Bills with Central Bank Iraq (63.6%) of the of the total)2.2%(total internal debt. While the Ministry of Finance's debt is :internal debt, as shown in the following figure

From the researcher's work, based on the statistical website of the Central Bank of - Iraq: www.cbiraq.org

As for the structure of the Saudi internal debt, which relies in its internal financing of the public budget by a large percentage on commercial banks and independent government institutions, as they constituted (62.3% and 35.8%) .respectively, i.e. with a total contribution of (98.1%) of the total internal debt

National Debt Management Center, reports and statistics, on the website: <https://www.ndmc.gov.sa/stats/Pages/default.aspx>

Turning to the structure of the Egyptian internal debt, we find that it differs from the internal debt of Iraq and Saudi Arabia in terms of financing sources and the number of tools represented in bills, bonds, credit facilities and loans, where the Egyptian internal debt = government domestic debt + indebtedness of the National Investment Bank + net indebtedness of economic public bodies - indebtedness interface, as shown in the figure below:

Figure (11): Structure of Egyptian internal debt at the end of June 2020

Prepared by the researcher based on the 2019/2020 annual report of the
.Central Bank of Egypt, Appendix, p. 10

As for the **internal debt structure in Jordan**, it is divided into secured debt at a rate of (11.7%) and debt within the public budget at a rate of (88.3%). Bonds and treasury bills constitute the highest percentage at (86.9%) of the :total internal debt, as shown in the figure below

from the researcher's work based on the annual report 2021, Central Bank
.of Jordan, p. 127

Conclusion:

1. The Arab oil-exporting countries in the research sample resort to tax revenues in the event of a decline in oil revenues.
2. The increase in oil revenues leads to the sustainability of the internal debt of the oil-exporting Arab countries in the research sample
3. The Arab oil-exporting countries that are the research sample resort to internal debt to finance public spending in their local currency.
4. The Arab oil-importing countries in the research sample did not benefit from the rise in gross domestic product to sustain their internal debt.

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Appendices.

Appendix (1) Iraq

(Million dinars)

Year	Public internal debt	tax revenues	public revenues
2005	6,593,960	495,282	40,502,890
2006	5,645,390	593,887	49,055,545
2007	5,193,705	1,397,991	54,599,451
2008	4,455,569	985,837	80,252,182
2009	8,434,049	3,334,809	55,209,353
2010	9,180,806	1,532,438	69,521,117
2011	7,446,859	1,783,593	99,998,776
2012	6,547,519	2,633,357	119,466,403
2013	4,255,549	2,876,856	113,767,395
2014	9,520,019	1,885,127	105,386,623
2015	32,142,805	2,015,010	66,470,252
2016	47,362,251	3,861,896	54,409,270
2017	47,678,796	6,298,272	77,335,955
2018	41,822,918	5,686,211	106,569,834
2019	38,331,548	4,014,531	107,566,995
2020	64,246,559	4,718,189	63,199,689
2021	69,912,394	4,536,242	109,081,464

Central Bank of Iraq, statistical website: www.cbiraq.org

Appendix (2)

Saudi Arabia

(million riyals)

Year	Public internal debt	Borrowed	paid	actual deficit/ surplus	Total Public Revenue	Ratio of tax revenues to total public revenues %
2005	459,647	41,445	192,406	217,861	564,335	
2006	364,622	35,997	131,022	280,360	673,682	
2007	266,762	11,180	109,040	176,552	642,800	
2008	235,034	298	32,026	580,924	1,100,993	
2009	225,108	217	10,143	-86,629	509805	
2010	166,999	15	58,124	86,986	740,872	6.8
2011	135,499	5,422	36,922	290,827	1,117,527	5.3
2012	83,848	0	51,651	329,340	12,46,538	0.1
2013	60,118	0	23,730	157,878	1,152,612	6.6
2014	44,260	0	15,858	-100,462	1,040,141	7.6
2015	142,260	98,000	0	-388,599	612,693	13.4
2016	213,455	97,020	25,825	-311,056	519,448	15.8
2017	259,502	58,455	12,408	-238,489	691,505	12.6
2018	304,980	48,750	3,272	-173,858	905,609	29.1
2019	372,764	69,839	2,055	-132,599	926,846	23.7
2020	502,656	174,253	44,360	-293,900	781,834	
2021	558,747	108,754	52,663	-73,447	965,486	

Internal debt: Central Bank of Saudi Arabia, economic reports and statistics, statistics, annual statistics: www.sama.gov.sa

ratio of tax revenues to total revenues: the work of the researcher.

(-)Values not available.

(Endnotes)

1 - The internal loan is recorded as revenue in the state's public budget, while the internal debt appears among public expenditures in the state's public budget, as it is considered revenue during the fiscal year in which the budget was prepared, while it is considered expenditures if the debt is repaid for a previous fiscal year, whether in terms of installments, interest, or Both.

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9- An old debt owed by the Ministry of Finance dating back to before 2003.

10-For more: see Annual Economic Report 2021: 50.

11- Appendix.(3)

12- Grants obtained from abroad by the Jordanian government.

13- Annual Report, 2017: 51.

14- The Federal Public Budget Law of the Republic of Iraq for the fiscal year / 2017, 2017: 24, 30.

15- Value Added Tax: The Zakat, Tax and Customs Authority: www.zatca.gov.sa

16- Effectively applied on the same date mentioned.

17- After the imposition of the value-added tax, the gross domestic product decreased by (11.7%), as shown in Table No. (7), but this effect cannot be relied upon due to the Corona pandemic, given that the imposition of the tax could lead to a reduction in production in order to increase the cost of the product.

18- Annual report, 2018/2019: 56

19- Current government borrowing entails higher taxes in the future (**Boyes & Melvin, 2011:247**).

20- Annual Report, 2017: 46-47.